Investigating the Culture Impact on Organizational Resilience in Organizational Enterprise area (A Case Study of Iran’s Ministry of Communication and Technology)

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Abstract
The present study is practical and followed a correlative method for description in data collection and has a quantitative approach. This research has been done to investigate the impact of culture on organizational enterprises (A Case Study of Iran’s Ministry of Communication and Technology). The statistical population of the research consists of 126 of managers and graduates of business and startup in 2017, a subcategory of ministry of communication and technology. They were selected based on the Cochran Formula, with the simple random sampling and the sample size was 95. The information analysis was done by Structural Equation Modeling (SEM) and Smart PLS software. About the hypothesis result, two hypotheses were rejected and four hypotheses were confirmed and the performance orientation was the most effective and the organizational capability was the least effective.

Keywords: resilience, organizational culture, organizational performance

Introduction:
Since the evolution of the concept of organizational culture in the mid-twentieth century, it has been defined in many ways; however, all these definitions have one thing in common: organizational culture consists of values, beliefs and assumptions which are shared or communicated among members(Schein,2010), guide behavior and facilitate shared meaning(Alvesson & Sandberg, 2013; Denison, 1996) . Organizational culture has been recognized as a new aspect of business management since the 1980s, and is considered as a means to actively deal with the fast changing environment. Organizational culture is used as a means for management innovation, organizational development, restructuring ,etc(Nam & Kim, 2016). Scholars have investigated the impact of organizational culture on performance. Wilson and Bates (2003) argue that a strong organizational culture plays the roles of reliable compass and strong ever that can guide organizational members’ behavior. According to Barney (1991) organizational culture is the main resource that organizations have to keep their competitive advantage and many studies have investigated the impact of organizational culture on organizational performance (Sinclair & Sinclair, 2009). The available literature implies that there is a relationship between organizational culture and organizational performance(Kemp & Dwyer, 2001). Many approaches have been presented on how the organizational resilience is built. Resilience has been conceptualized in the business world in many ways. Some have focused on developing the concept in the area of supply chain management and designing, as it has been done by Pettit, Croxton & Fiksel (2013), and some researchers have considered its customer-centric views like Gulati (2010). Resilience is the developable capacity to rebound or bounce back from adversity, conflict, and failure or even positive events, progress, and increased responsibility(Luthans & Youssef, 2007). Therefore, creating enterprise culture of resilience sets the foundation for effective recovery, future success and sustainability(Alesi, 2008; Coles & Buckle, 2004).

Resilience in organizational level is a structural dynamics and a process which makes the organization get the required capacity to withstand difficulties. Resilient organizations are known to have dimensions such as effective structures of power, social relations, reality acceptance, positive approach toward change, difference and communication(Luthans & Youssef, 2007).

Parsons (2010) defines the organizational resilience as a capability and argues that resilience and culture are strongly related. It says that resilience is the result of culture, attitude, process and framework combination. A
resilient organization reacts to the changes like a person who reacts to the disease— an inherent power to recover with the least external impact(Daskon, 2010; Hiles, 2010).

In resilience culture, there is an open space to report and to deal with the organizational problems and risks(elliott, Swartz, & Herbane, 2010). Resilient organizations are those who can tolerate discontinuity and pause(starr, Newfrock, & Delurey, 2003). As there has been no general study on the relationship between the organizational culture and resilience in organizational business of Iran’s Ministry of Communications and Technology, the aim of this research is to investigate the organizational culture impact on resilience of organizational business of Iran’s Ministry of Communications and Technology in Tehran.

Research Literature
Definition of Organizational Culture
Hofstede et al. (1990) suggest that organizational culture impacts on and is impacted by structures, role expectations, problem solving approaches, decision making routines and practices. It also impacts authority structures, tasks and rules, and coincides with Schein’s (1985) idea on culture and leadership/authority. In later studies, Ravasi and Schultz (2006) argued that organizational culture is set of shared mental assumptions, which guide the working behaviors within an organization. However, various conceptualizations of organizational culture have been proposed in the literature(Detert, Schroeder, & Mauriel, 2000; Jung et al., 2009).

The Harwiki model (2016) analyzed the servant leadership impact on organization culture, organizational commitment, organizational citizenship behavior (OCB) and employee performance, organization culture impact on organizational citizenship behavior (OCB) and employee performance, organizational commitment impact on organizational citizenship behavior (OCB) and employee performance and OCB impact on employee performance. The result showed that servant leadership has a significant impact on organization culture, organizational commitment, OCB and employee performance. Organization culture has a significant impact on OCB but has no impact on employee performance. Organizational commitment has no significant impact on OCB and employee performance and OCB significantly impacts employee commitment(Harwiki, 2016).

Hofstede(1980) introduced a model proposing four dimension of culture, and named its four dimensions: power distance, uncertainty avoidance, individualism versus collectivism, and masculinity versus femininity. The finding leadership style have a significant impact on organization culture(Sabir, Sohail, & Khan, 2011), then developed by Harwiki (2013)(Harwiki, 2013). Jo and Joo (2011) proved that organization culture learning has positive leadership with OCB, and improving the organization’s performance and the performance of employees (Hakim, 2015). Nigel and Nikala (2002) showed that OCB impacting on sales performance of employees. Servant leadership is related to performance(Harwiki, 2016). Whyte (1956), Miller and Lee (2001) stated that organizational commitment is mostly characterized by employee’s acceptance of organizational goals. Organizational commitment and OCB have been suggested by William and Anderson (2003), and were explored previously by Organ and Ryan(1995). Enhancing organizational commitment among employees is an important aspect to perform better. Allen and Meyer (1996) suggested three kinds of organizational commitment that are, affective commitment, normative commitment, and continuance commitment. Suliman and Lies (2002) explored the nature of organizational commitment on employees’ job performance, their finding showed a positive relationship between commitment (all the three components) and occupation performance. Later Bowler and Brass (2006) confirmed the correlation between OCB and employee performance, and Wirawan (2009) noted dimensions for measuring employee performance: job result, job behavior and personal attitude.

Krigman and Rivolta (2016) investigated whether inside directors improve organizational resilience using the context of sudden CEO departures when immediate CEO succession planning is of great importance. A firm’s ability to have a quick recover from setbacks is of great importance to its stakeholders and investors. Although critics argue that inside directors decrease the monitoring effectiveness of a board, inside directors arguably possess superior firm specific experience and knowledge which could improve organizational resilience. Using a unique data set of 351 sudden CEO departures from 1991 to 2009, they found evidence that firms with inside
directors other than the CEO are more resilient. Moreover, a firm’s resilience after a sudden CEO departure is expected to be enhanced when its outside directors are well-connected(Krigman & Rivolta, 2016).

Hashim et al. (2015) in their study, provide a relationship between the role of brand identity to create resilience and enhancement in business performance of small and medium enterprises. In fact, the main goal of the research was to identify the elements which create resilience in small and medium businesses. In this research, brand is mentioned as an important factor in success of Malaysian small and medium businesses. Thus, the government of Malaysia has developed many entrepreneurship programs and allocation of funds to assist them to be competitive and resilient locally as well as globally. Accordingly, a powerful brand has been one of the main agenda in enhancing small and medium enterprises performance. Therefore, brand is a factor to enhance resilience and small and medium enterprises. It's a case study and the data was collected by interviews. The coding technique was used to analyze data. Internal Elements (Corporate Identity and Organizational Identity) and External Elements (Corporate Image and Reputation) can assist in creating resilient quality for enhancing business performance to create a brand identity(Hashim, Tajuddin, & Zainol, 2015) Peltola (2012) considers Entrepreneurship as a survival strategy for companies that act highly competitive in business environment(Tajpour, Moradi, & Moradi, 2015).

**Resilience**

Resilience, in an organizational meaning is the ability to withstand crises and disturbances, has become a keyword during the last ten years. It is associated with established activities like risk and crisis management and business continuity planning or with strategic management and helps enterprises to keep up their activities in any conditions(Pal, 2013). An organization’s resilience capacity captures its ability to take situation-specific, robust, and transformative actions when confronted with unexpected and strong events that have the potential to jeopardize an organization’s long-term survival(Lengnick-Hall & Beck, 2009). Organization resilience capacity is a multidimensional set of routines, resources, behaviors, capabilities, and mental models that leads to organizational resilience. Resilience leads to superior performance of the organization(Lengnick-Hall & Beck, 2009).

Resilience has been conceptualized in the world of business in many ways, some have focused on the corporate attributes that yield resilience by understanding its drivers and how to sustain it through positive adjustments (e.g. Weick and Sutcliffe (2001), Weick and Sutcliffe (2007). Some have aimed at expanding the concept in the field of supply chain management and designing(Falasca, Zobel, & Cook, 2008; Pettit, Croxton, & Fiksel, 2013) while some researchers have looked into its customer-centric perspectives(Gulati, 2010).

**Five principles of organizational resilience**

1. **Leadership**: Resilience begins with enterprise leadership setting the priorities, allocating the resources and making the commitments to establish organizational resilience throughout the enterprise. Leadership achieves a balance between risk taking and risk containment to ensure ongoing innovation, but in the context of prudent risk minimization.

2. **Culture**: The second component of organizational resilience is enterprise culture. A resilient culture is built on principles of organizational empowerment, purpose, trust and accountability.

3. **People**: As mentioned above, the bedrock of organizational resilience is the enterprise workforce. People who are properly selected, motivated, equipped and led will overcome almost all obstacles or disruptions.

4. **Systems**: The RVO is built on an infrastructure of extensive enterprise connectivity and information robustness. The extensive infrastructure is strongly related to business system. Because a system with flexible capabilities can even lead to resilience enhance and withstand challenges.

5. **Settings**: The final component of the RVO architecture is the physical deployment of the workplace. Workplace resilience is achieved through the distribution of the workplace into multiple, dispersed settings(Bell, 2002).
A study has done to investigate the effects of organizational culture and organizational resilience over the riskiness versus non-riskiness categorization of subcontractors. This study utilized multiple sources of data collected in two different time setting. Results from this research showed interesting facts. Subcontractors that were characterized by high-performance orientation, high uncertainty avoidance and high future orientation were categorized as non-risky (Borekci, Rofcanin, & Sahin, 2014).

Li and Zahara (2012) indicated that organizational which are characterized by high uncertainty avoidance have low tolerance for risk taking. The last organizational culture dimension that was closely associated with contractor-subcontractor relationship risk is future orientation (Li & Zahra, 2012). Previous research showed that organizations that reflect high performance orientation have high performance and aim at long-term strategic planning (R. J. House, Hanges, Javidan, Dorfman, & Gupta, 2004). Building on previous research and social cognitive theory (Luthans & Youssef, 2007), organizations that have resilience in structural reliance, organizational capability and process continuity dimensions are confident about their capabilities to recover in case of risk materialization and therefore they perceive risks as opportunities to exploit. Thus, they involve in efforts to return to their original conditions against adverse conditions and keep face with the ongoing changes.

<table>
<thead>
<tr>
<th>Resilience dimensions</th>
<th>Key characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structurally reliant systems</td>
<td>Structurally reliant systems have built in technical, social and economic redundancy in order not to be overly dependent to others. Technical redundancy (know-how, experience), social redundancy (employee roles and skills related to their occupations), and economic redundancy (sufficient operational and financial resources) increase a system’s capacity to face various risks.</td>
</tr>
<tr>
<td>Organizational capability</td>
<td>Organizationally capable systems have built in technical (market), social (productive) and economic (risk) capabilities. Technical capabilities (not being dependent on few firms, customers or products), productive capabilities (diverse, willing and flexible workforce) and economic capabilities (being financially robust) are expected to be sources of variance across risky and non-risky subcontractors.</td>
</tr>
<tr>
<td>Processual continuity</td>
<td>Processual continuity ensures continuous flow of technical, social and economic resources against various kinds of risks. Technical resources (raw materials, technology and information), social resources (continuity that a firm ensures to hire, develop and maintain skilled workforce), and economic continuity (business continuity or growth by access to funding and by strategy formation) are also among the resilience dimensions that are potential sources of variance against risky and non-risky subcontractors.</td>
</tr>
</tbody>
</table>
According to what mentioned above, finally the model was designed as follows:

### Research Conceptual Model

**Organization Culture**
- Performance orientation
- Future orientation
- Avoidance of uncertainty

**Organization Resilience**
- Structural reliance capability
- Organizational capability
- Processual continuity

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**risky and non-risky subcontractors**

### Research Hypotheses

According to the review of the literature, the following hypotheses are suggested:

- **H1.** There is appositive and significant relationship between the performance and organization risk.
- **H2.** There is appositive and significant relation between the future orientation and organization risk.
- **H3.** There is appositive and significant relation between the avoidance of uncertainty and organization risk.
- **H4.** There is appositive and significant relation between structural reliance capability and organization risk.
- **H5.** There is appositive and significant relation between organizational capability and organization risk.
- **H6.** There is appositive and significant relation between processual continuity and organization risk.

### Methodology

The present study is practical and followed a correlative method for description. The statistical population of the research includes 126 of managers and graduates in business and startup in 2017, a subcategory of ministry of communication and information technology. They were selected based on the Cochran Formula, with the simple random sampling and the sample size was 95. The data to be investigated in this research was collected by resilience questionnaire and organization culture dimensions considering the research literature. The designed questionnaire containing 28 items was given to managers and MA graduates related to enterprises and startups which are the subcategory of ministry of communication and information technology in Tehran. The grading was based on Five Point Likert-type Scale and the grades of 1-5 belonged to the scales of very poor-very well. As you see in table 1, it shows that the Cronbach alpha coefficient and the construct reliability of all constructs is more than the minimum acceptable that is 0.7; so the constructs of the research are well reliable.

### Table 1. Cronbach Alpha and the Construct Reliability

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As you see in table 2, Average Variance Extracted shows that all constructs are more than the minimum acceptable that is 0.5. (Fornell & Larcker, 1981). Therefore, the constructs of the research have a pleasant reliability.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Cronbach Alpha</th>
<th>Construct Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Orientation</td>
<td>0.921</td>
<td>0.923</td>
</tr>
<tr>
<td>Future Orientation</td>
<td>0.911</td>
<td>0.917</td>
</tr>
<tr>
<td>Avoidance of Uncertainty</td>
<td>0.905</td>
<td>0.986</td>
</tr>
<tr>
<td>Structural Reliance</td>
<td>0.964</td>
<td>0.945</td>
</tr>
<tr>
<td>Capability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational Capability</td>
<td>0.912</td>
<td>0.901</td>
</tr>
<tr>
<td>Processual Continuity</td>
<td>0.925</td>
<td>0.962</td>
</tr>
</tbody>
</table>

Based on the Fornell and Larcker theory (1981), in investigation of convergent validity of constructs, the extracted root mean square of variance for each construct is compared with correlation coefficient of the constructs. As you see in table 4, the highlighted numbers on main side of the table are the extracted root mean square of the variance. If we compare these construct values with the correlation of the mentioned construct, it can be realized that extracted root mean square of the variance for all constructs are more than the correlation of the mentioned construct with other constructs. Therefore, all constructs are valid and divergent.

Table 3. Validity and divergence test matrix

<table>
<thead>
<tr>
<th>Construct</th>
<th>Performance Orientation</th>
<th>Future Orientation</th>
<th>Avoidance of Uncertainty</th>
<th>Structural Reliance Capability</th>
<th>Organizational Capability</th>
<th>Processual Continuity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Orientation</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Future Orientation</td>
<td>0.681</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoidance of uncertainty</td>
<td>0.324</td>
<td>0.712</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural reliance capability</td>
<td>0.497</td>
<td>0.651</td>
<td>0.756</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational capability</td>
<td>0.707</td>
<td>0.754</td>
<td>0.654</td>
<td>0.567</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Processual continuity</td>
<td>0.723</td>
<td>0.524</td>
<td>0.821</td>
<td>0.743</td>
<td>0.832</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Result analysis

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In this level of data analysis, the structural equation modeling has been used. The structural equation modeling is a statistical model to investigate the relationships between the latent variables (unobserved) and the manifest variables (observed). In this research, SmarLS has been utilized. First, the primitive model was drawn. Then, the factor loading coefficient of all components were checked to be used in fitting evaluation of measuring models. According to the studies, the factor loading coefficient of all questions and relationships were more than the minimum acceptable that is 0.4 (Hulland, 1999) which shows that standards are appropriate. In second level, the research structural model fitting and the latent variables are investigated. For this reason, the first and basic standard, Z coefficient or T-values has been used. As you can see in figure 2 and table 5, T value of four relations among six relations in the model, are more than 1.96; and it shows that there is a appropriate and significant relation between the constructs. As a result, the hypotheses are confirmed and the confidence level is 95%. In the next level, we dealt with the standardized coefficients of factor loading related to the direction of each hypothesis to determine the effectiveness of endogenous and exogenous variables. These coefficients show to what percentage the independent variables changes are explained by the mentioned independent variables.

Table 4. Result from model directions by structural equations

<table>
<thead>
<tr>
<th>No</th>
<th>direction</th>
<th>Effective coefficients</th>
<th>T values</th>
<th>test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Performance orientation-risk</td>
<td>0.763</td>
<td>12.095</td>
<td>Hypothesis confirmed</td>
</tr>
<tr>
<td>2</td>
<td>Future orientation-risk</td>
<td>0.637</td>
<td>13.746</td>
<td>Hypothesis confirmed</td>
</tr>
<tr>
<td>3</td>
<td>Avoidance of uncertainty-risk</td>
<td>0.741</td>
<td>8.941</td>
<td>Hypothesis confirmed</td>
</tr>
<tr>
<td>4</td>
<td>Structural reliance capability-direction</td>
<td>0.530</td>
<td>0.893</td>
<td>Hypothesis Rejected</td>
</tr>
<tr>
<td>5</td>
<td>Organizational capability-risk</td>
<td>0.461</td>
<td>1.926</td>
<td>Hypothesis Rejected</td>
</tr>
<tr>
<td>6</td>
<td>Processual continuity-risk</td>
<td>0.543</td>
<td>3.477</td>
<td>Hypothesis confirmed</td>
</tr>
</tbody>
</table>

It can be derived from above discussion that organizations which are mostly determined by high performance orientation and avoidance of uncertainty consider the risks as threats for the networks of their relationship. Therefore, these organizations will be careful and will face less risks related to operations and decisions. Organizations with high avoidance of uncertainty are less patient toward risks. (Li & Zahra, 2012). Organizationally capable systems have built in technical (market), social (productive) and economic (risk) capabilities. Technical, productive and economic capabilities are expected to be as variance resource systems (disagreement) across risky and non-risky subcontractors. Structurally reliant systems have built in technical, social and economic redundancy in order not to be overly dependent over others. Technical redundancy (know-how, experience), social redundancy (employee roles and skills related to their jobs), and economic redundancy (sufficient operational and financial resources) increase a system’s capacity to face and mitigate various risks. It indicates the degree to which organizations plan for and make investments for future (House et al., 2004). Previous research revealed that organizations that reflect high performance orientation have high performance and focus on long-term strategic planning. (House et al. 2002). Das & Teng (2001) experimentally showed that suppliers-customers who share a high degree of future orientation don’t act opportunistic in order to maintain the interactions. It guarantees that a continuous flow of technical, social and economic resources against various kinds of risks. Technical resources (resource prime material and information), social resources (the continuity that a firm ensures to hire development and to maintain skilled
workforce) and economic continuity (enterprise continuity or growth by access to financial resources of strategy formation) are the resilience dimensions and the potential resource of variance against risky and non-risky subcontractors.

**Suggestions**

As two variables of the resilience dimensions were rejected in this research, it’s suggested that top managers change their approach.

1. Structurally reliant capability: organization mostly doesn’t have a good performance where there’s no reliance between managers and employees and managers trust some special people in organization and this can reduce the organization performance. Therefore, it would be better that managers trust employees based on their abilities and support their creative ideas. Second, it would be better to give employees positions in organization structure according to their skills and education. Third, top managers should encourage employees in order to motivate them give a good idea.

2. Organizational capability: they can assist organizational performance by attending the market with high abilities and capabilities. A Genius expert is needed in this section. Second, they should allow employees take risk so that they can present good solutions considering the available weakness in organization.

**Resource:**


xiii. Harwiki, Wiwiek. (2013). The influence of servant leadership on organization culture, organizational commitment, organizational citizenship behavior and employees’ performance (study of outstanding


